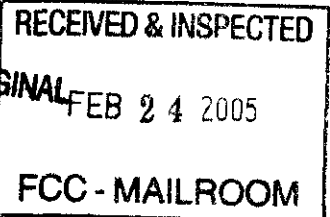


ORIGINAL

Before the  
Federal Communications Commission  
Washington D.C. 20554

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In the Matter of

Amendment of Section 73. 202( b) Table of Allotments, FM Broadcast Stations.

(Connersville, Madison, and Richmond, Indiana, Erlanger and Lebanon, Kentucky, and Norwood, Ohio; and Lebanon, Lebanon Junction, New Haven, and Springfield, Kentucky)

MB Docket No. 04- 17 RM- 11113 RM- 11114

**BLER 20000728AEF Morristown, Indiana**

**Channel Change to reduce Television Interference - Engineering Showing**

Comes now Indiana Community Radio Corporation ("ICRC") and non commercial WJCF in the above noted matter with an Engineering Showing.

ICRC is Licensee of WJCF Morristown, Indiana which operates on **Channel 201A**. Since the inception of WJCF, ICRC has received complaints of interference to a local Channel 6 station, WRTV Indianapolis.

The impact of the PRM is that it would create an available allocation at CH 262A for WJCF to relocate to, and allow dual city service to Morristown, Indiana (current Community Of License) and Whiteland, Indiana which has no existing aural FM service licensed to it, as a non commercial educational FM station.

This Engineering Showing details the interference problems and attempted resolution of problems during the past 5 years of operation of WJCF.

**Television Channel 6 Interference**

Commission Staff is aware and it is of record before the Commission that WRTV Channel 6 Indianapolis Indiana has opposed WJCF operations as it has reported thousands of it's potential viewers could be affected.

**Line of Sight Considerations**

Due to other allocations WJCF was required to locate in an area that does not have line of sight to the WRTV tower in Indianapolis. This area is in a bowl. Due to the "bowl" area near the WJCF tower not only does the WRTV signal have trouble reaching receivers, the WJCF signal overcomes the capture effect of local receivers.

The terrain at the WJCF transmitter site and the distance and line of sight to the

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WRTV tower are both noted in the attached line of sight showing.

WJCF is at 60 meters and at this height versus the height of local television antennas many receivers cannot capture the WRTV audio at 87.7 when WJCF is at 88.1.

**If this allocation were in an area where WRTV Channel 6 has a line of sight signal the interference issue would be greatly reduced or not a problem.**

The PRM Counter Proposal submitted by ICRC (WJCF) and Hoosier Public Radio to make an allocation change would resolve this issue.

### **WRTV Antenna Changes**

*Prior to the construction of WJCF , WRTV lowered it's antenna and changed from an omnidirectional antenna to a panel antenna which is "theoretically omnidirectional". The change removed over 20,000 persons from the WRTV contours.*

This change which is of record before the Commission also lowered the height of the WRTV antenna and removed line of sight to many potential viewers.

WRTV received many letters from viewers prior to WJCF construction that indicated the antenna changes had adversely affected WRTV reception. These letters can be produced if Commission Staff would require.

A pattern study for the "theoretical" omnidirectional pattern on a tower face the size of the WRTV tower shows deep nulls in the pattern but it is accepted this pattern is "theoretically" omnidirectional and the Commission allows stations to use such designs. The antenna which was replaced was the standard bow type design pole mounted on the top of the tower. The new antenna is a face mounted Kathrein Scala panel.

Despite the "theoretical pattern" it is noted the signal cannot be received at the WJCF transmitter site without a high gain antenna and preamplifier which contributes to the existing problems on Channel 201A. When WJCF begins digital broadcasts it will entirely remove WRTV from television sets in the area. A copy of pattern nulls can be provided but the pattern has been included within filings by WJCF previously.

### **Zoning and Governmental Issues**

WJCF received zoning for it's tower and this proper zoning required a special exception. There is no limit on tower height in the County. There is no limit on height of *any structure* above roof level not intended for human occupancy.

Despite the proper zoning the local zoning authority will not issue a building permit, which IS required to raise height to overcome the capture effect. The local zoning authority has attempted to redact the zoning for the present tower

due to interference. This is an ongoing dispute.

Some towers in the county have never received a zoning permit. One Commission Licensee WKPW Knightstown is less than 4 miles away and has erected two towers during its history. WKPW has never been required to apply for a building permit.

The local zoning authority discusses the interference as a basis for preventing any zoning changes including a building permit in public meetings as the reason for their denial but not in their written denial. Hundreds of persons have appeared at meetings and while there it is the "capture effect" of television receivers, locals believe the problem will go away if the radio station does.

Death threats to WJCF principal Jennifer Cox-Hensley have been noted during zoning meetings. Locals have threatened to blow up the transmitter with dynamite during zoning meetings.

### **Threats to Safety**

One local has stalked the station volunteers and staff and has taken pictures of children with volunteers at the transmitter site.

A tower climber was threatened while doing repair work on numerous occasions. Gunshots are common during tower work as well as threats to tower climbers.

Multiple attempted break ins have been reported to the Rush County Sheriff's Department. One such attempt someone clogged the exhaust air for the WJCF transmitter.

The movement of WJCF appears to be limited to Rush County Indiana and on Channel 201A there is no ability to erect a new tower or modify the existing tower to provide better service to Morristown, Indiana, or modify a Commission License. A modification of the License for WJCF to Channel 262A would be in the Public Interest.

### **Resolution with Filters**

WJCF has had *significant contact* in regards to interference with the audio of WRTV Channel 6 because WJCF is at 88.1 and WRTV audio is at 87.75.

Over 600 names were on petitions sent to local government officials regarding interference to WRTV. These petitions were also sent to Commission staff. Commission staff has noted multiple contacts due to this allocation because of the capture effect. Local residents do not understand electronics and how a weak television signal contributes to audio reception of WRTV. They believe that the License of WJCF should not have been issued.

The first Television complaint was in June of 2000 when WJCF began operation. A couple actually blocked the driveway to the station transmitter with a car and would not let staff leave until the couple had made threats and vowed to harm WJCF.

Despite offering to install filters this is a rural area and many do not trust the placement of filters for various illogical reasons. Afraid of spy equipment in the filters or other similar concerns, the filters are not allowed.

In 2000 many filters were purchased from Radio Shack, Channel Master and others which were broad filters. The filters removed as much WRTV rf as WJCF rf making them useless.

Later WJCF found Microwave Filter Company made filters which were notched to the WJCF frequency 88.1. Even these filters are unacceptable without an amplifier on most systems because they are not tight enough to remove WJCF rf without removing WRTV rf they have helped.

### **Numbers of complaints**

WJCF received about 50 complaints in the first year but this number has continued to increase. Some of the complaints were in areas several miles away. These areas were where there was no line of sight to WRTV. Moving a high gain antenna towards WRTV sometimes corrected the problem. Other times a new antenna resolved the problem. WJCF is now receiving at least 10 new calls or complaints a month.

Of the initial complaints received by the Commission, including the 600 plus names on petitions they were grouped into categories: 1) Receiver overload (nearby) ; 2) Poor cable connections (no shield) to televisions; 3) Improper antenna to receive Channel 6; 4) Preamplifier overload ; 5) Automatic Program Capture problems on newer television sets.

Due to height restrictions on raising the antenna height, an entire community, Knightstown Indiana, is at the same height as the antenna for WJCF , less than 5 miles away. Anyone with no terrain obstructions to the tower in this community of a few thousand people has a difficult time receiving Channel 6 audio.

In the complaints sent to the Commission it was discovered that some of those who complained had f connectors that were busted and had no shield connection, a mismatch in cables including rg 59 cable that had only aluminum foil type shield that would never stay firmly connected to the connector, and antennas that were not even connected to the antenna cable.

Of those that complained and had good rf connections, no preamp within the 70dbu contours would allow operation at full gain. Only by filtering and removing gain would *any* preamp work.

Another problem that has to do with capture effect has become more noted. Every year at Christmas more complaints begin like something new has taken place. We also note this after widespread power outages. It has been determined that the automatic program search on newer televisions within 8 miles of the WJCF transmitter site will never stop on Channel 6 audio but will always place WJCF audio with the WRTV picture. The station now routinely has a time to sign off so they can program their television sets. This affects approximately 7000 persons near the WJCF tower.

There are those who probably have not called WJCF, have not had problems resolved, and have ill feelings because of this.

WJCF has had the support of various volunteers who have gone to homes, answered calls on complaints, and distributed filters but there are still regular irate callers who need assistance.

WJCF has provided technical support, filters, and other assistance and some people actually understand. There are those who do not understand and have a hatred for the station that affects the operation of the station. A channel change to 262A for WJCF is in the Public Interest.

This problem is well known to Commission Staff and Field Bureau Staff who have : taken irate phone calls, received complaint letters and petitions from over 600 persons; and who have had to investigate other complaints related to television interference. Copies of letters and petitions can be provided if desired but the problems are of record.

### **Policy concerning Channel Change to Avoid Interference**

Commission precedent in this area is specific. Another local noncommercial station, WFIU Bloomington, Indiana, was originally allocated in the reserved band. Due to Channel 6 interference the Commission changed the WFIU allocation to Channel 279B in the nonreserved band.

WJCF is interested in digitally broadcasting it's signal. At 88.1 the digital interference on 87.9 will remove Channel 6 from most televisions in the area surrounding the WJCF tower. An allocation change from Channel 201A to Channel 262A is in the Public Interest.

### **Instant Amendment**

Upon approval of the PRM Counter Proposal WJCF would apply to modify it's license or Construction Permit, or, alternatively, file a new Construction Permit for the facilities. ICRC requests the ability to use contour protection in the siting of the Construction Permit if needed.

The current channel in use by WJCF **Ch 201A** could be used by Hoosier Public Radio Corporation to resolve an MXed noncommercial time share application.

ICRC would support such a change. By letter of support, Hoosier Public Radio Corporation is on record supporting this Counter Proposal.

The move by WJCF from Channel 201A to Channel 262A will remove all interference to Channel 6 television. The use of Channel 201A by Hoosier Public Radio in an area where there is no terrain obstruction to the WRTV tower will result in a minimal number of interference complaints, or, what is normally associated with a station in the reserved band and Channel 6 television.

This action is supported by Commission precedent and supported by engineering in this Engineering Showing, and is in the Public Interest.

### **ICRC Hardship**

The current operation of WJCF involving volunteers has been difficult to maintain with the interference issues which have faced the station because of poor consumer equipment and line of sight issues related to coverage both in the Community Of License and elsewhere. The instant proposal is in the Public Interest.

### **Current Proposal**

Community	Present	Proposed
Connersville, Indiana	262B	service deleted
Madison, Indiana	*266A	*265A
Richmond, Indiana	267B	267B1
Erlanger, Kentucky	265A	266A
Lebanon, Kentucky	265C3	-----
Lebanon Junction, Kentucky	297A	274A
New Haven, Kentucky	-----	297A
Norwood, Ohio	-----	262A
Springfield, Kentucky	274A	265A

### **Counterproposal or additional benefits of existing proposal**

Community	Present	Proposed
Connersville, Indiana	262B	
Madison, Indiana	*266A	*265A
Richmond, Indiana	267B	267B1
Erlanger, Kentucky	265A	266A
Lebanon, Kentucky	265C3	-----
Lebanon Junction, Kentucky	297A	274A
New Haven, Kentucky	-----	297A
Norwood, Ohio	-----	262A
Springfield, Kentucky	274A	265A
Morristown, Indiana	201A	262A (Non Commercial)
Greenfield Indiana	CH 201A	

## Conclusion

The Engineering Showing submitted to support the Counter Proposal by ICRC provides for several benefits: 1) First time Service for Whiteland, Indiana; 2) Increased coverage of listeners of WJCF (nearly 100,000 new persons) ; 3) better coverage of Morristown, Indiana, the WJCF Community Of License; 4) Resolution of Channel 6 issues, which will receive significant interference from WJCF *not if but when Digital Broadcasting is undertaken*; and 5) All the benefits are in The Public Interest and Necessity.

The Commission has acknowledged that such interference is the result of inadequacies in the design of television receivers but that the overall benefit to the Public is served by such changes as proposed. The *Engineering Showing* details that this would be the effect if the ICRC proposal is permitted.

Indiana Community Radio Corporation is one of a very few broadcast operations in the United States operated and headed by a female broadcaster. This move would assist in the resolution of long time problems for the station and allow for the potential for station growth.

Based on the foregoing facts the ICRC and Hoosier Public Radio Counter Proposal is in the Public Interest and is supported by this Engineering Showing.

  
Martin Hensley

I am Martin Hensley. I have submitted an Engineering Showing and Exhibits on behalf of Indiana Community Radio Corporation. I affirm under penalty of perjury that the statements herein to be true and correct.

  
Certificate of Service

A Copy of this Engineering Exhibit was mailed first class postage to :

The Federal Communications Commission, Office of the Secretary, 445 Twelfth Street, SW, TW- A325, Washington, D. C. 20554 9(original and 4 copies) . Additionally: Mark N. Lipp, Esq. John F. Garziglia, Esq. J. Thomas Nolan, Esq. Howard Barr, Esq. Scott Woodworth, Esq. Counsel for Washington County CBC, Inc. Counsel for Rodgers Broadcasting Corporation Elizabethtown CBC, Inc. and CBC of Marion Vinson & Elkins, LLP County, Inc. 1455 Pennsylvania Avenue, N. W. Womble Carlyle Sandridge & Rice, PLLC Washington, D. C. 20004 1401 Eye Street, N. W. Seventh Floor Washington, D. C. 20005 15.

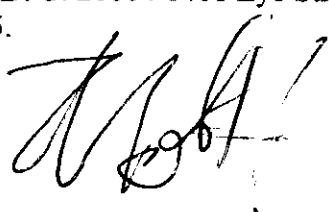


Exhibit - Terrain Profile WJCF Transmitter Site to WRTV Tower Site from Com  
Study

Exhibit - Channel 201A

Exhibit - Policy to Govern Change Of FM Channels to Avoid Interference to  
Television Reception



**FEDERAL COMMUNICATIONS COMMISSION**

WASHINGTON, D.C. 20554

**PUBLIC NOTICE****POLICY TO GOVERN THE CHANGE OF FM CHANNELS TO AVOID  
INTERFERENCE TO TELEVISION RECEPTION**

(Adopted February 2, 1966)

**BY THE COMMISSION: COMMISSIONERS HYDE, LEE, AND WADSWORTH  
ABSENT.**

The Commission is becoming increasingly concerned over petitions for rulemaking which ask that FM channels be changed or deleted to avoid actual or potential interference to the reception of VHF TV stations operating between 174 and 216 Mc/s (channels 7-13). This interference can occur whenever the second harmonic of the FM signal (twice the FM frequency) falls within the channel of the TV signal or is generated within the TV receiver.

In an information bulletin entitled "Potential Interference to Television Reception From the Operation of FM Broadcast Stations on Certain Frequencies," issued on February 10, 1965 (FCC 65-130), we explained how this type of interference originates, and what could be done to eliminate or alleviate it and we called upon FM stations, TV receiver manufacturers, and the general public to take whatever measures are needed to insure that both of these important services could exist without adverse effect upon each other.

We pointed out that the problem frequently involves TV receiver design and is one which ordinarily is not taken into account in assigning FM or TV channels. We also stated that we had made some frequency changes for FM stations where a simple solution agreeable to all parties concerned was sought but warned that as the number of FM stations increases this type of solution might not be possible.

Our experience since the issuance of the bulletin has confirmed our views that FM channel changes are not a satisfactory solution to the problem. There are several reasons for this conclusion. Deleting the FM channel which is harmonically related to the TV channel receiving the interference, and refraining from assigning it to another community which might have the same potential problem, makes for an inefficient allocation plan and reduces the assignments available to the FM service. Often, moving an offending assignment or making changes in assignments will shift the interference to another area or to another high-band VHF TV station.

In the past, the Commission has approached the problem from the point of view that, although most of the problems stem from inadequacies in TV receiver design, the overall public interest would be benefited where changes in FM channels could be made conveniently. The situation is, however, changing in that channel reallocations are

becoming more difficult to make with the increasing number of FM stations, and it appears only a matter of time before it will become impossible in many areas to make changes without adverse effect upon the public.

In view of the foregoing, the Commission is adopting the following policy to become effective on March 1, 1968. Petitions for FM channel changes will not receive favorable consideration unless:

1. Where actual interference to TV reception is being caused:
  - (a) Engineering showings are included which give evidence of the interference claimed and indicate the efforts made to eliminate the problem.
  - (b) A showing is included that no FM channels are deleted, no class A channels are substituted for class B or C channels, and the proposed reallocation will not result in a potential second harmonic problem being shifted to another city or TV station.
2. In situations involving potential interference only, petitions for rule-making include an analysis of the nature and extent of the expected problem, and a showing that the proposal will not result in any loss of potential FM service or would not shift the problem to another community or another TV station.

The Commission wishes to emphasize that in the electromagnetic environment in which receivers must operate currently and in the future, the allocation of frequencies to meet receiver inadequacies is not justified. The spectrum is simply too valuable to afford this luxury.

We expect receiver manufacturers to design receivers reflecting the state of the art. Where design inadequacies in various situations result in interference being received, we feel that the installation of suitable receiver filters is the appropriate remedy. If cooperative effort by all concerned is not adequate to achieve solutions to interference cases caused by receiver design problems, the public interest may require a request for legislation looking toward the protection of the general public by adequate regulatory authority over receiver design.